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CRITICAL INTELLIGENCE ISSUES OF THE 80s

Marine Corps Reconnaissance, Surveillance and Target Acquisition in the 80s

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UNDER THE BEST OF CONDITIONS, the requirement to "find and fix" the enemy's movers, shooters and emitters is a challenge to any organization's reconnaissance, surveillance and target acquisition (RSTA) capability. Looking forward to the 1980s, this challenge to the Marine Corps is even more imposing.

While rapid deployment in response to worldwide contingencies has long been a demonstrated capability of the Marine Corps, the advent of the Maritime Prepositioning Ships (MPS) concept introduces new complications for the Marine Corps in the 1980s. In addition to maintaining our traditional role of forceable entry in amphibious operations, we must be prepared to move rapidly by air, marry up with our forward deployed equipment prepositioned aboard specially configured commercial ships in the objective area and then carry out any one of a myriad of operational missions assigned.

This complex activity must be executed in a manner which ensures that the Marine commander has continuous and responsive intelligence support throughout the entire process, from the airlift phase to the potential "movement to contact" phase. Yet, the very nature of MPS deployment suggests that the commander will frequently be separated from his normal intelligence and RSTA assets. During such periods, the commander must rely on theater or national intelligence assets to keep abreast of a potentially volatile and changing situation. This, in turn, places heavy reliance on his accompanying communications, both while airborne and upon reaching the objective area. Upon arrival in the area, he may find Marine forces deployed with Navy, Army and Air Force units, each having unique organic RSTA assets. Service system interoperability now becomes a factor as assets such as Air Force RF-4C's, Navy EP-3C's and Army SOTAS systems commence operations and provide products of high potential value.

The Marine Corps must be prepared to employ its RSTA assets in threat environments ranging from high intensity against modern, sophisticated opposition, to low intensity against insurgents, terrorists or similar groups with varying degrees of combat capability. The weapon systems and emitters we must "find and fix" may be Communist-produced or may be of United States or Allied origin.

As the state-of-the-art technology is incorporated into the weapon systems of the 80s, the need for real-time and near-real-time systems to detect and engage the opposition becomes essential. We look forward to a Marine Corps tactical intelligence system in the mid-80s which comprises automated SIGINT collection, processing and dissemination, including airborne collection and direction finding capabilities; enhanced capabilities in ground sensors, including a capability for remote emplacement; and the fully-fielded Marine Air-Ground Intelligence System with its capability to integrate products of theater and national systems to provide timely, responsive intelligence support to Marine commanders.

The challenge of the 80s is clear: a tactical RSTA system which will provide tailored and timely intelligence; the flexibility to operate under varying and demanding conditions; interoperable with other Service theater and national systems; as mobile as the unit it supports; capable of rapid deployment; and supported by communications which will ensure that the products get to the commander in time for decisive actions.

The Marine Corps acknowledges the contributions of the AFCEA community toward meeting this challenge, and looks forward to your continued assistance.

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Emergence of New or Enlarged Intelligence Requirements

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AS WE MOVE INTO THE DECADE of the 1980s, it is certain that the intelligence community will be called upon increasingly to provide vital support to our national security decision-making processes. In this regard, I am reminded of a perceptive statement made by a senior intelligence official in 1977 in specific reference to the changing intelligence environment. This official noted that two things stand out most clearly:

"• There are more things about which we need intelligence data.
• There is the prospect that intelligence may be harder to obtain."

Our intelligence efforts have historically been heavily oriented toward the military aspects of world events and remain largely so today. But while military considerations remain vitally important, our need for economic and political intelligence has an increasing impact on our national security as well. This is a central feature of the contemporary environment: the emergence of new or enlarged intelligence requirements which are in addition to, rather than instead of, more traditional categories of intelligence.

Looking at some recent events, it seems to me that an extremely useful outcome of the SALT II debate within the Congress was a generally increased awareness of the capabilities of intelligence to contribute to our national security not only in respect to SALT but also across the entire range of our security interests.

In addition to the obvious need to maintain our intelligence focus on coverage having long-range strategic importance, I believe it is clear that our need for political/economic/military intelligence on other functional and geographic areas will continue to grow. Recent events in Iran and Afghanistan underscore this need. I believe that we must have a sizeable increased investment in both intelligence collection and analytic resources during the next decade if we are to serve the nation's vital interests and take maximum advantage of the opportunities available to us to produce intelligence of great value to this country.

It is my personal conviction that a prudent investment now in our overall intelligence posture will pay back huge dividends as we move further into the 1980s. The challenge facing those of us in the Intelligence Community is to plan wisely and be able to articulate our programs well in order to build the necessary levels of understanding and support in the decision-making levels of both the Executive Branch and the Congress. The debate must be focused on what we as a nation need in the way of first class intelligence, not on what we can do without. An integral part of this process will necessarily involve a more detailed education of the public (to the maximum extent possible within sensible classification bounds) of the vital role of intelligence in relation to the national security of the United States.

Improving Our Analytical and Dissemination Capabilities

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THE 1980s WILL BE a dynamic and challenging period for people in the intelligence business. Throughout the decade, the potential for international instability and turmoil will be very high. In this difficult setting, the intelligence community must continue to identify and, indeed, anticipate the changes in the foreign political, military and economic environment.

One of the greatest challenges faced by intelligence professionals may well be the development of improved ways of analyzing and disseminating intelligence information. Developing, procuring and employing the most cost-effective and mission-effective collection systems will, of course, continue to be vital tasks. Our technical capability to collect intelligence should keep pace with needs though, and collection in the 1980s will likely be characterized by the generation of a large variety and heavy volume of timely, but "raw," data, especially in times of crisis. To ensure the data is used effectively, our analytical and dissemination capabilities must be equal to the technical potential of collection systems. This will require progress in several areas.

First, to separate and correlate the key bits of information in a large volume of data, better analytical tools will be required. Many of the approaches to answering this problem undoubtedly can be found in the data automation field. Computer-assisted analysis capabilities will be essential.

Secondly, improved communications will be critical to our efforts to ensure effective dissemination of the intelligence. In the tactical warfare setting, especially, one can anticipate a need for near "real-time" communications. Here even the luxury of "a matter of minutes" may not be available to the tactical commander. Decisions may have to be made in seconds. To do this, the commander must have the best and latest intelligence available. Moreover, it must be presented or displayed in a manner that facilitates rapid decision making. To ensure that this is achieved, we must pay continued attention to improvement of both our information handling and communications capabilities. Here again, data automation will play a significant role. The contributions of America's dynamic electronics industry will be central to our efforts.

Finally, for Air Force intelligence, and the others in this business, there is one particular area in which we absolutely must make progress. Intelligence work in the 1980s will require personnel with highly developed technical and analytical skills. However, the demand for such skills in the private industrial sector, especially in the field of communications and electronics, has outstripped the existing supply of these highly trained personnel. The ability of the military to compete with industry for these people, and retain the ones we have, has never been great. Therefore, the real challenge for military intelligence will be to build a structure that permits us to attract, appropriately train and then retain in our business the people who will, as always, be our most valuable resource in the 1980s. The challenge for industry and, indeed, the nation as a whole, will be to help us train and create a pool of technically and analytically qualified people in order to meet the needs of both industry and the military community in the decade of the 80s and beyond.

The Soviet Naval Threat

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THE CLOSE OF THE 1970s is more than a convenient benchmark for the Soviet Navy; it is in fact a significant milestone which marks the end of a full generation of dramatic Soviet naval progress and accomplishment. It has brought within grasp a Russian aspiration nearly three centuries old; an open ocean Navy capable of actually influencing world events. The signs are clear and unmistakable: there has been a major shift in the basic mission of the Soviet Navy, and as a result, the Soviet leadership in the 1980s will have at their disposal political and military options never before available.

Already established as the greatest Russian naval builder since Peter the Great, Admiral of the Fleet of the Soviet Union Sergei Gorshkov at age 70 still has a few more years to consolidate and expand what he has termed the "balanced fleet." Balanced to Gorshkov means being capable of achieving any or all of the broad range of traditional Naval missions:

- destruction of enemy naval forces, especially U.S. submarines and aircraft carrier task forces—sea denial;
- protection of Soviet areas for Soviet economic and military use—sea control;
- strategic nuclear strike and deterrence;
- support of ground forces, primarily in areas contiguous to the Soviet Union;
- cutting of enemy sea lanes;
- support of Soviet foreign policy in all areas of the world;
- projecting power ashore.

During this period of rapid Soviet naval development, top priority was obviously given first to matching the United States nuclear submarine missile force. In the last 10 years, the Soviets have built on the order of 55 nuclear ballistic missile submarines, and although the rate of construction has leveled off, we expect the Soviets to continue building even larger ballistic missile submarines, with long range, more accurate missiles.

Even while building this nuclear deterrent force, the Soviets have succeeded in developing a formidable and increasingly capable number of general purpose submarines. The Soviets added about eight submarines in 1979, a majority of which were nuclear attack types, bringing the total of general purpose nuclear submarines to almost 100.

At the same time, they were carrying out their ambitious submarine building programs, they have also carried out an equally ambitious naval surface ship construction program. In the final analysis, this could be of even greater significance, since it could well indicate the ultimate course that Soviet naval seapower will take in the 1980s and beyond. Over the past 10 years, the Soviets have built an average of 12 principal surface combatants each year. They have in progress series production of four impressive new classes of cruisers, one of which is nuclear powered. Adm. Gorshkov, a surface sailor earlier in his career, has convinced the rest of the Soviet leadership that future wars will not necessarily be settled solely by massive nuclear exchanges. The Soviet Union must prepare, he has said, for conventional wars, and an open-ocean navy is necessary for that.

Finally, the Soviets have expanded their naval power into new areas: amphibious warfare, at-sea replenishment and now sea-borne aviation. Although not conclusive, the accumulated evidence to date points to the development of a larger conventional take off and landing aircraft carrier by the end of this decade. If

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indeed the Soviets continue the progression we have seen to date, the new carrier will probably also be nuclear powered.

What is most impressive about the Soviet Navy today, however, and of longer range significance, is the capital investment the Soviets have made in their shipbuilding industry—both surface and submarine construction and repair yards. Five shipyards are building submarines, eight are building surface warships and several others produce minor warships and auxiliaries. The yards now available to the Soviets are capable of easily sustaining construction rates far in excess of the rates we have seen during the past decade, and they have obviously been developed with a view to satisfying wartime requirements for repair facilities.

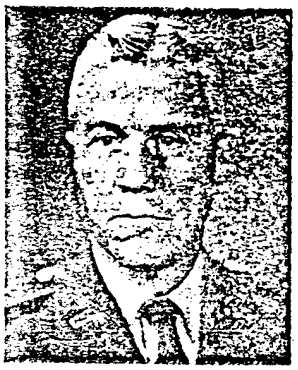
The sum of these efforts is impressive. A generation ago a defensive coastal force, outclassed by several other navies, the Soviet Navy in 1980 is second only to the United States, and this trend of increasing capabilities continues into the foreseeable future.

1980 is the last year of the current Soviet five-year plan. For the world to see, the Soviets will probably have failed to reach many goals, especially in their domestic economy. But also for the world to see is a naval building effort which, by any measure, has been a success.

1980 is the end of a generation of Soviet naval achievements. It is likewise the beginning of a new naval age, both for the Soviet Union and the United States, as the two navies grow more evenly-matched in an open-ocean competition that could alter the course of history.

In summary, the thought I would like to leave with you is that there are clear and unmistakable signs that the Soviet Navy is changing its orientation and its mission. Defense of the homeland is still paramount in Soviet strategic planning, and the Soviet Navy figures prominently in such plans. However, the balanced fleet which Adm. Gorshkov conceived and built has far greater capabilities than are required for a purely defensive role. The Soviet leadership obviously recognized the increased range of political and military options that such a navy affords them. They have proved this, both by the way they employ their Navy in support of Soviet national interests today, and by the mammoth capital investment and resource commitment they are making in their Navy's future.

Army ISTA of the 80s



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RECENT TACTICAL INTELLIGENCE initiatives in the area of Intelligence, Surveillance and Target Acquisition (ISTA) have contributed significantly to the modernization and effectiveness of the Army's fighting forces. The development and fielding of new equipment is an important facet of this program. Equally important is the management of the total structure of tactical intelligence, which includes personnel, their training and new organizations as well as the best equipment that our technology can develop.

The nucleus of intelligence support to tactical commanders is the Combat Electronic Warfare Intelligence (CEWI) unit assigned to Corps and Divisions. A CEWI Battalion assigned to each Division and a CEWI Group per Corps are currently being integrated into the Army force structure. These units will control all the intelligence sensors directly responsive to the Division or Corps G2; provide the organizational framework for collection management plus target and intelligence development; manage Electronic Warfare assets; and assist the G3 in EW and Operations Security planning. The CEWI concept has proved very successful in the efficient multidiscipline management of ISTA/EW equipment and has greatly increased the accuracy and timeliness of intelligence products. Concern with tactical intelligence does not stop at Corps level. Echelons Above Corps (EAC) play a key role in providing tactical commanders intelligence on enemy forces that could affect their areas of operations. The U.S. Army Intelligence and Security Command (INSCOM) provides the ISTA support required at EAC and INSCOM units are tied closely with CEWI elements at Corps and Division. Under the conditions of modern warfare, particularly that envisioned in a European conflict, the contributions of INSCOM units are critical to tactical commanders. The size, speed and mobility of Soviet forces demand that we acquire information from multiple sources on second echelon units long before they can affect the battle along the line of contact. We must be able to disrupt, wear down or destroy these forces as far away as possible, beyond the range of the ISTA sensors available to the Divisions or Corps. EAC elements can provide this intelligence needed for deep targeting through a multidisciplined collection effort and analysis of resultant information utilizing Intelligence Preparation of the Battlefield (IPB) techniques.

ISTA/EW hardware has improved significantly over recent years and advancements in technology promise even greater improvements in the decade of the 80s. The challenge is to develop sensors that will provide location data on enemy units with sufficient accuracy to permit immediate targeting (i.e., within 50 meters) and have automated executive systems that can receive this sensor input, process it and send the data to supporting fire units (artillery or tac air) in seconds.

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Further, the sensor systems must be enemy independent, that is they must have the ability to collect intelligence despite the enemy's efforts to conceal his operations. Technology is currently available to accomplish this challenge. ISTA sensors are now being fielded or are in development, and the system to tie it all together, the All-Source Analysis System (ASAS), is expected to be fielded in the mid-1980s. Our development efforts continue to be hampered by an excessive period between conception and fielding of equipment but a dedicated, positive approach to this problem throughout the Army will reduce the time lag.

In summary, we are entering an exciting period of ISTA development within the Army intelligence community. Tactical commanders deserve the best intelligence and the most accurate and responsive targeting system that modern technology can provide. Success against the Soviets or any other potential adversary demands our collective best effort in meeting this challenge!

The Challenges Confronting U.S. Military Intelligence

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THE HEALTH OF THE U.S. military intelligence structure has never been better. Its work force is more professional than at any previous time. Computers, communications and other technical aids provide unprecedented capabilities to move and to analyze information. The traditional jobs—military capabilities, order of battle, technical characteristics of equipment and so forth—are being done well. We are continuing to improve.

How then, can one reasonably speak of critical issues for the 1980s? Simply because doing the traditional things well is certainly not enough, and the current rate of performance improvement may not be rapid enough. Military intelligence must change with, or ahead of, the times. It must recognize and accomodate new needs while continuing to improve its service to long established needs.

That comment undoubtedly has a familiar ring. The fact that organizations and organisms perish or prosper as they adapt to change is widely understood. Yet, I doubt that *SIGNAL* readers have had occasion to relate this principle to the challenges confronting U.S military intelligence. A few examples of such challenges may help.

For military intelligence, technological change poses at least four major challenges. The first is keeping up with the truly explosive growth of militarily significant technologies in the traditional industrialized countries. The second is maintaining currency on the rapid transfer of technology to areas now developing rapidly. The third is adequately tracking indigenous technological growth in those developing countries. The fourth is correlating technological advance with military capabilities. We know technology is very important to military capabilities, but we do not know how to express military capability as a function of technology when many other variables are present.

The spread and increase of technology is paralleled by the spread and increase of military capabilities. Many of the formerly "underdeveloped" countries have developed into regional military powers. Some of these powers will undoubtedly be able to enhance existing capabilities by purchasing modern equipment and by further growth of indigenous industrial and technological capabilities. Some will be able to develop nuclear, chemical or biological capabilities. Some will be able to purchase or produce rather sophisticated electronic warfare gear. The sheer workload of remaining adequately abreast of this rapid technical and military capabilities growth will be a major challenge.

Turning to non-technical matters, military capabilities rest upon supporting political, social, economic and cultural institutions. It has often been observed that military establishments are expressions of the supporting infrastructure. Our understanding of that infrastructure in many areas is inadequate now, and the supporting institutions are undergoing rapid change. Our ability to understand the infrastructure will be a major factor in our understanding of military capabilities and regional balances. Raising that understanding to the desired level will be a major challenge.

This brief commentary can only suggest some of the major challenges ahead. What is certain is that the challenges are large, that they extend across many disciplines, both "hard" and "soft," and that the need for excellent minds, excellently trained, will be greater than ever.

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The Long Term Health of the Intelligence Community

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THREE YEARS AGO, President Carter signed Executive Order 12036 establishing a new system to manage and oversee American intelligence. Since that new beginning, the Intelligence Community has been tested by world events and influenced, not only by those same events, but by changing national priorities, demand for greater public accountability and the need to continue to produce a high quality intelligence product.

Since then, our best substantive performance has been in areas where we have traditionally excelled. Support for SALT II, for example, demonstrated the Community's broad and diverse collection capabilities as well as perceptive and unbiased analysis. Timely and accurate assessments of events in Vietnam and Afghanistan drew creatively on a variety of ambiguous indicators to provide clear warning.

There have been important procedural and organizational accomplishments during this same period which will affect the long term health of the Intelligence Community. For the first time in our 33-year history, a closely reasoned, truly integrated National Foreign Intelligence Program budget now provides the means for judging competing intelligence programs against national needs. Vastly improved relations between the CIA and the FBI have engendered this country's strongest counterintelligence program in over a decade. A renewed and expanded dialogue with the academic and business communities is invigorating our analytic effort.

However, challenges remain. Just functioning effectively in a world which during the 1970s learned more about intelligence operations than was ever known is a serious challenge.

Recognizing and assessing small but potentially significant degrees of political and social change has become increasingly important and can severely test the most discriminating observer. Analysts must try to draw conclusions from a gallimaufry of factors ranging from religious and ethnic to socio-economic, generational and institutional. The problem of collecting this kind of raw intelligence demands not only a heightened sensitivity to subtle clues, but often new techniques, both human and technological.

The Community is further challenged today by the greatly expanded range of issues with which intelligence must deal. Not only must we continue to study Soviet military capabilities, but more and more attention must focus on other areas which have the potential to disrupt international stability. The growing commerce in narcotics, the spread of terrorism, population growth, famine, disease and the accessability of goods and raw materials are but a few.

While the Intelligence Community's plate is full and the task may seem overwhelming, I have every confidence that we will be able to continue providing the best quality of intelligence to the policy maker. But to do that, every intelligence organization, along with the business community, which has for so many years brilliantly provided us with the technological means to do our work, must play an important part.

The functions of individual intelligence services were reasonably distinguishable at one time. Today they are much less so. Despite E.O. 12036, the structure of the Intelligence Community and its sometimes divergent interests understandably still tend to encourage competition for functions and resources. Competition in the analysis we do is healthy and to be sought. Competition in system development or collection wastes resources and risks limiting our capabilities unnecessarily. Within the Community, we must work to prevent the destructive fractionalizing of the intelligence budget, or the building of new structures to circumvent it, which will only result in increased costs without commensurate return.

American business can help by recognizing that while we all would hope to remain on the frontiers of technological innovation, that is not always financially possible. The Intelligence Community, the United States and the interests of business are better served when marginal gains at great cost are identified for what they are and funds as well as creative effort are directed toward areas where there is greater confidence in and need for the gains to be achieved.

None of these problems can be solved overnight, nor goals reached by a single effort. But as T. S. Eliot said, "History is now." What we do today to capitalize on the formidable capabilities we have and to solve the problems we can identify will strengthen our contribution to a history we can all be proud of. It will require open minds, an uncommon willingness to subordinate parochial interests to measures which are more in the long-term good of the country and frequent checking to ensure we are all looking through the right end of the telescope. None of that is easy, but we will not succeed without it.

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